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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,533	07/22/2003	Eric R. Fossum	M4065.0841/P841-A	4895

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EXAMINER	
SEFER, AHMED N	
ART UNIT	PAPER NUMBER
2826	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/623,533	FOSSUM ET AL.	
	Examiner	Art Unit	
	A. Sefer	2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22,24,25,27-33 and 53-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22,24,25,27-33 and 53-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

THOMAS DICKEY
PRIMARY PATENT EXAMINER

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed November 20, 2006 have been fully considered but they are not persuasive.

2. Applicants argue that the combined references of Kawahara et al. ("Kawahara") USPN 6,618,086 in view of Nakashiba ("Nakashiba") USPN 6,498,622 and Kawahara in view of Merrill ("Merrill") USPN 5,965,875 do not teach the invention as recited in claim 53. Specifically, Applicants argue the Kawahara reference does not disclose a method that comprises, inter alia, a "first well region being separated from the photosensor," because (Applicants argue) that the element described in claim 53 as a "photosensor" is identical to Kawahara's "part 110 [which] is a 'light-receiving element region formed with the phototransistor and the light-receiving MOS diode.'"

3. In response, it is pointed out that during patent examination, the pending claims must be given their "broadest reasonable interpretation consistent with the specification." In re Hyatt, 21 1 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). While the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. In re American Academy of Science Tech Center, WL 1067528 (Fed. Cir. May 13, 2004) (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation). This means that the words of the

claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004). The Examiner believes that, under the "broadest reasonable interpretation" standard, the claim term "photosensor," may mean a region (such as Kawahara's region106) where charges are formed in response to applied light. As is shown in Kawahara's fig. 1A, it is clear that first well region 103 is a separate entity from photosensor 106.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 53, 54 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara in view of Nakashiba.

Kawahara discloses in figs. 1-3 forming a photosensor in a substrate 101, the photosensor 106 for forming charges in response to applied light; forming a first well region 103 in the substrate, the first well region being separated from the photosensor 106 and being doped to a first conductivity type; forming a storage region 104 located in a first well region 104, the storage region 103 for collecting charge generated by the photosensor 106 and being doped to a second conductivity type, but lacks anticipation of a shielding layer over the storage region.

Nakashiba discloses in fig. 4 a photosensor including shielding at least a portion of a storage region 206 by forming a shielding layer 200 over the storage region.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Kawahara's photosensor by incorporating a shielding layer since that would provide a high voltage output as taught by Nakashiba.

Regarding claim 54, Kawahara discloses (col. 5, lines 2-4) the storage region comprising a p-type region and the first well region comprises an n-well.

Regarding claim 58, Kawahara discloses forming a photosensor comprising one of forming a photodiode.

6. Claims 53-55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara in view of Merrill USPN.

Kawahara discloses in figs. 1-3 forming a photosensor in a substrate 101, the photosensor for forming charges in response to applied light; forming a first well region 103 or n-well (as in claim 56) in the substrate, the first well region being separated from the photosensor and being doped to a first conductivity type; forming a storage region 104 located in a first well region, the storage region for collecting charge generated by the photosensor and being doped to a second conductivity type, but lacks anticipation of a shielding layer over the storage region.

Merrill discloses (col. 4, lines 23-25 and figs. 12 and 13) a photosensor located within a well region or n-well (as in claims 55 and 56) including shielding at least a portion of a storage region (**region under the shield**) by forming a shielding layer (unnumbered) over the storage region.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Kawahara's photosensor by incorporating a shielding layer since that would allow light to strike the photosensor region.

Regarding claim 54, Kawahara discloses (col. 5, lines 2-4) the storage region comprising a p-type region and the first well region comprises an n-well.

Regarding claim 57, Merrill discloses **(col. 4, lines 23-25)** a metal light shield layer over a well region.

Regarding claim 58, Kawahara discloses forming a photosensor comprising one of forming a photodiode.

Allowable Subject Matter

7. Claims 22, 24, 25 and 27-33 are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANS
January 19, 2007